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AN ADDRESS

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Gentlemen of the Massachusetts Society
for the Promotion of Agriculture,

It appears to be expected, that at each of your anniversary meetings, a discourse on Agriculture should be delivered. The Trustees of the Society have requested me to address you at this time. But though willing to be laid under contribution to the great object of your institution, it has occasioned a degree of solicitude to present something meriting your attention. From the multitude of books written on the subject of agriculture—embracing in that word whatever should employ the thoughts and the labors of the skilful husbandman—the field would appear almost boundless: yet to select topics particularly interesting to the farmers of Massachusetts, and here to discuss them so as to communicate useful and acceptable information, was not unattended with difficulty. My address must necessarily be miscellaneous.

Philosophers and practical husbandmen have for ages employed their thoughts and their pens on the various operations in agriculture; yet diversities of opinion still exist; and the reasons of many of these operations have been little more than conjectural. What constitutes the food of plants, has long been a subject of diligent inquiry. It was natural to suppose that if this food could be discovered, it could more easily be provided, or at least be more efficaciously administered. The palpable differences which distinguish the immense variety of plants, in their forms, textures, colors, and tastes, naturally suggested the idea, that each variety required its specific nourishment. Yet it being a matter of common observation, that the same soil would nourish and bring to maturity multitudes of different plants, of very opposite qualities—some yielding wholesome food, and others a deadly poison—at the same time all growing together, and robbing one another; a nobler and more simple idea presented itself—that the food of all plants was the same; but that each species was endued with the power of converting that food to its own peculiar substance: as among animals, the same grain produced all the varieties of flesh which go to sustain the life of man. In the vegetable kingdom, this supposed power of conversion seemed strikingly apparent in the effects of grafting of fruits. The juices imbibed by the roots from the earth, and immediately changed to the proper sap of the native stock, ascend and spread through all the limbs; and if each of these be grafted with a different fruit, the varieties will be as numerous as the branches.

By the modern discoveries in chemistry, these mysterious effects seem to be accounted for. For it appears that all kinds of plants are composed of a small number of elements, whose different arrangements and combinations produce all the varieties in question. Seldom more than seven or eight of those elements belong to plants, and three constitute the greatest part of their organized matter. But each of these is a compound, consisting of the same materials, only in different proportions. The three principal ingredients in the food of plants, and which by them elaborated constitute the food of man and other animals, are named by chemists, carbon, oxygene, and hydrogene; in other words, charcoal, vital air and inflammable air; and these exist in the air we breathe, as well as in manures consisting of vegetable and animal matters.

It may seem incredible that the thin air, an invisible matter, should be changed, in the process of vegetation, into solid substances, as wood and stone: but nothing has been more clearly ascertained, than that in 100 parts of pure limestone, 45 parts are fixed air, or carbonic acid; which in the act of burning the stone into lime, is expelled: for if at that time the stone be weighed, it will be found to have lost so much of its original weight. It is also well known that this same lime, which slaked with water, or exposed to the air, falls down into a powder, will immediately afterwards begin to imbibe fixed air from the atmosphere, and eventually, though slowly, recover its original weight. It is this same carbonic acid, or fixed air, which at the bottom of wells, every year proves fatal to a number of lives. For this air, when separate, being heavier than the air of the atmosphere, sinks and remains at the bottom of wells, and is a deadly poison. It is the oxygene in the atmosphere, called also vital air, because essential to animal life, which mingled with the fixed air, renders the latter harmless.

I have introduced these few remarks on the food of plants, to present an idea—a very faint one indeed—of that very interesting subject; which, as already observed, has so long employed the thoughts of philosophers and agricultural writers; but the satisfactory discovery of which seems to have been reserved for the present age. This view serves to account for the vast variety of plants which will grow on the same spot of earth; the ingredients of their food being substantially the same, but varied in the proportions peculiar to each; and which each has the faculty of appropriating to its own use; rejecting the rest, or casting it off as excrementitious.

But although the same articles of food will afford nourishment to a variety of plants, yet these are so formed as to require a variety of soils, adapted to their several constitutions; some preferring a stiff, others a loose or light soil—some a moist and others a dry one. Few, however, will refuse a well compounded loam. Soils (like plants) however diversified in appearance, consist of different proportions of the same elements. Four earths generally abound in soils; and these, by chemists, are called aluminous, siliceous, calcareous, and magnesian; and of these the three first are the principal; and, in familiar language, well known to every farmer, as clay, sand, and lime. Magnesia is often found in limestones; and the combination is said to give the strongest lime for the farmer's use; so as in smaller quantities to serve his purpose, as well as mild lime applied in much larger quantities.

The first object which claims the farmer's attention, is the nature or constitution of the soil. The next embraces the means of enriching it and preserving its fertility. That intimate mixture of clay and sand which is called loam, is the most desirable soil, as being already prepared for every operation in agriculture. A stiff clay demands opening by the addition of sand and other materials; and a sandy soil requires the addition of clay. But calcareous earth is considered as essential to give to soils the capacity of attaining the highest degree of fertility. Few soils, indeed, are wholly destitute of calcareous matter, though it may be invisible to the eye: but very few possess so large a portion of it as would be salutary. There can be little danger, therefore, of applying it to excess in Massachusetts, where so little in any form has been found. Limestone is the great source of calcareous matter. But this is of various qualities. Very little of it is purely calcareous. Some lime stones in Great Britain have been found to contain eleven parts in twelve of sand. Of such lime, if sixty bushels were spread over an acre of ground, five bushels only of calcareous matter would be applied. To know then the constitution of the lime he uses, is important to the farmer; and not less so to the mason in preparing his mortar, which will require the addition of more or less of sand, according to the composition of the lime. All marles contain calcareous matter, and are of greater or less value, according to the proportion which this bears to the clay, sand, or other substances mingled with it. All shell fish will supply this material. In some parts of the United States, remote from limestone, oyster shells are burnt to obtain lime for building; and in all seaport towns where many oysters are used for food, their shells will be found in quantities deserving the neighboring farmer's attention; and if raised in piles, mingled with wood, may be burnt to lime.

Of the vast improvements of the lands in Scotland, within the last forty or fifty years, lime has been the basis; and the use of it the first step towards rendering the application of manures, strictly so called, highly productive. There they will lay from fifty to two hundred or more bushels on an acre. In Pennsylvania, where lime has been long and extensively used, twenty to fifty bushels to the acre has been found sufficient, and safer than any larger quantity, at least in the first application. A remarkable instance of the beneficial use of lime, though only at the rate of about twenty bushels to the acre, well merits a recital. The experiment was made on a field of ten acres, for which the farmer had provided two hundred bushels; but it being his first essay in using lime, it so happened that the whole quantity was disposed of when he had gone over nine acres. Indian corn was planted; and the crop was very great. The next year, the field was fallowed, and at seed time sown, a part with wheat and a part with rye; and good crops were produced. "In the Spring (says the farmer) I

sowed it with clover and timothy (Herdsgrass) and put two bushels of plaister on an acre; and had as great a crop of clover as could grow; it lay three weeks before the time of mowing." He adds—"The lime and plaister did all this; for no land could be poorer before. Where I laid no lime, I got no clover, although I put on the plaister."* The kind of soil in which lime operated so powerfully, is not mentioned: but probably it was clayey; a very common soil in the country where this land lay. Another like instance occured in the Delaware State, on a clay farm, on which plaister produced no effect until the land was limed.† While lime operates very beneficially on strong clays, it is said to be still more useful on lighter soils. To ascertain its effects on any lands, will require but little time and a small expense. A single cask of lime will be sufficient for a number of comparative experiments. If a few adjoining rods of land be set apart for the purpose, and the lime, by slacking, brought to a fine powder, it may be evenly spread on the several small strips, in different proportions, at the rate of twenty and any greater number of bushels to the acre. Then, by raking or harrowing, mix the lime with the surface soil, and plant each strip equally and uniformly with Indian corn. One equal strip, tilled and planted exactly as the others, but left unlimed, will enable the experimenter to see what advantage may arise from liming. In the next year the effects of lime in its respective proportions, may be further tested, by sowing the same strips with equal quantities of one sort of grain and of grass seeds.

In like manner, small experiments may be made to try the effects of clay on light sandy or gravelly loams, and of sand on stiff clays. The clay should be carried on and spread, and lie on the surface during the winter, to break and moulder by the alternate frosts and thaws, that it may be more effectually mixed with the soil.

As to the manner of applying lime, I am satisfied the best is that recommended and practised where lime has been most extensively used: that is, to slake it with water, and as soon as it falls to a fine powder and is cool, to spread it evenly over the land, and with the harrow mix it with the soil; its greatest utility depending on its intimate incorporation. In liming extensively, the lime is often, perhaps most commonly, carried on and dropped in small heaps, to be slaked by the moisture in the air: but it should be carefully attended to, that it may be spread as soon as it is slaked; or there will otherwise be danger of its setting in lumps, which may never again be duly pulverized.

If the application of lime be, as is represented, so important to the great and permanent fertility of the soil (and of this I entertain no doubt,) while the knowledge of the fact is all that is essential for the practical farmer to know; something more is desirable to satisfy inquisitive minds; and if the reason for using lime, or its mode of operating, could be shown, it would give confidence to the husbandman, while it gratified the philosophical inquirer.

A gentleman who is reputed to be one of the greatest chemists of the age (Sir Humphrey Davy) informs us that "when lime, whether freshly burnt or slacked, is mixed with any moist fibrous matter, there is a strong action between the lime and the vegetable matter, and they form a kind of compost together, of which a part is soluble in water:"—that "by this kind of operation, lime renders matter which was before comparatively inert, nutritive; and as charcoal and oxygene (vital air) abound in all vegetable matters, it (the quick lime) becomes at the same time converted into carbonate of lime;" that is, it is restored, by again combining with carbonic acid or fixed air, to the state in which it existed before it was burnt, except its being reduced to powder. Again he says—"Mild lime, powdered limestone, marles or chalks (for chalk is a limestone) have no action of this kind upon vegetable matter; by their action they prevent the too rapid decomposition of substances already dissolved; but they have no tendency to form soluble matters." He then remarks, that "chalk, marle, or carbonate of lime, will only improve the *texture* of the soil; or its relation to absorption; acting merely as one of its earthly ingredients. Quick lime when it becomes mild, operates in the same manner as chalk; but in the act of becoming mild, it prepares soluble out of insoluble matter." Again he says—"All soils are improved by mild lime, and sands more than clays."

While quick lime, according to this celebrated chemist, is so usefully applied to land abounding in fibrous matter, to effect its speedy dissolution, he says its application should be avoided, where a soil contains much soluble vegetable manure; as it either tends to decompose the soluble matters by uniting to their carbon and oxygene, so as to become mild lime, or it combines with the soluble matters, and forms compounds having less attraction for water than the pure vegetable substance.

But an ingenious writer, under the signature of Agricola, in Nova-Scotia, says, that notwithstanding all these precautionary fears, the offspring of chemical creation, the British farmer is mostly in a habit of applying quick lime to all sorts of soils. And he assigns an adequate reason, that caustic lime cannot remain any length of time in the ground, without passing into a carbonate and becoming mild. This writer offers different reasons for the beneficial operation of lime: that it is capable of absorbing not only that quantity of carbonic acid which it possessed in its natural state (being 45 parts in 100) but an additional quantity; and can form what chemists call an hypercarbonate. This, he says, is highly soluble in water: which accounts for the admission of lime into the structure of plants; and that this excess of carbonic acid adheres very loosely to its base (the mild lime) and is liberated without any extraordinary degree of heat. The carbonic acid, a most important article of vegetable food, is copiously evolved in the putrefactive process of manures; the calcareous earth fixes and prevents its escape—forms with it a hypercarbonate, and readily imparts it, in union with water, towards the nourishment of the crops. It is supposed to do more; it unites with the carbonic acid floating in the air; and when there is a scarcity of aliment in the soil, it seizes and secures this food in the atmosphere, and afterwards disperses it, according to the calls and necessities of vegetation. Hence the necessity of keeping lime on the surface. It is then ready to intercept, and combine, with the carbonic acid which is generated by the fermentation of the putrescent matter lying at lower depths, and to attract the same gas (the carbonic acid) from the surrounding air.

I confess myself much better satisfied with the observations of Agricola, in accounting for the operation of lime, than with the solution offered by Sir Humphrey Davy. If the statement of the former be correct, we can see a reason for the long continuance of the beneficial effects of lime on land: for although it is not itself food for plants, it is constantly employed in collecting and imparting to them that food, from the sources which have been mentioned. Does not the reasoning of Agricola also indicate the cause why lime benefits sands more than clays? The latter are opened and rendered lighter by its application: and to destroy their too great tenacity, seems to be a main advantage gained by liming clay soils; whereas sandy soils are already sufficiently porous.

An old English practice of burning clay for a manure, has lately been revived in England, and with some appearance of novelty. The facts stated in regard to its operation, preclude all doubt of its efficacy. On stiff clays, it has, in the practice of some farmers, superseded the use of lime: because, although much greater quantities of it are required, yet being on the spot, in the very field where it is wanted, it is much cheaper than lime, for which the farmers are often obliged to send upwards of twenty miles.—It is said that clay thus burnt,—in which the process is so managed as to reduce the clay to the condition of ashes,—will not again, when wetted with rains, recover its original texture of a close compact substance too tenacious of water, and when dry, too hard for the roots of plants freely to penetrate. I have called the burning of clay for manure an old English practice: for I find an account of it in the second of Dr. Eliot's Essays on Field Husbandry, written and printed in Connecticut upwards of seventy years ago. The Doctor gives a recipe, copied from an English book, for the process of burning it; which is with a *smothered fire*, a point of indispensable necessity, according to the present practice in England.

Many ways of improving lands, both in the manner of cultivating them, and in the kinds of useful plants to be introduced, have been often recommended; and certainly a spirit of improvement has been extensively excited: yet much remains to be done, to raise our crops to an equality to those in some European countries, whose lands and climates are no better than our own. But have we the means of accomplishing it? I answer, generally, that we have. Our animals for labor are equally efficient. Our instruments of husbandry are as good, or capable of being easily made so. Our husbandmen are as intelligent, and unquestionably less prejudiced, and less averse to adopt improved modes in farming. In England, a bigotted perseverance in ancient practices, however absurd, has in times past been astonishing. Her own writers inform us, for instance, that in one county all their common ploughing has long been performed with one pair of horses driven by the ploughman; while in an adjoining district four or five horses, in a single line have been put to the plough, with the addition of a driver, and yet ploughing no more land, nor with a deeper furrow, than was elsewhere effected with one pair of horses.

But although I suppose no prejudices equally strong exist among us, still we are, I think, too

* Memoirs of the Philadelphia Society of Agriculture, Vol. I. p. 193. †Ibid, Vol. II, p. 187.

prone to adhere to old usages, where no good reasons can be given for them. New practices in husbandry are often—perhaps chiefly—attempted by persons not bred to that occupation, and these, for want of practical skill, may often fail in the execution; and when successful, the success is ascribed to a liberal expenditure of money, beyond the ability of the mere farmer. But what risk will attend experiments made by farmers themselves, to test the value of these novelties? Each one for himself can try them on as small pieces of ground as shall suit his convenience, and at a very small expense of time and money. The introduction of improvements would be facilitated, if the money expended, and especially the quantity of labor bestowed upon them, were always accurately stated, and their authenticity vouched by the names of the improvers. And if the experimenters, in these cases, who hire all the labor, and this often performed in their absence, are merely *not losers*,—practical farmers, always present, and working too with their own hands, would assuredly render such new practices *profitable*.

But I apprehend the knowledge of modern improvements in husbandry is far less extended than may commonly be supposed. That celebrated Travelling Agriculturist, the late Arthur Young, a man of science and literature as well as a practical farmer,—after visiting different districts in England, for the purpose of observing, and for the information of his countrymen describing their various modes of husbandry, commenced, about the close of the American War, his Annals of Agriculture. He afterwards travelled over France and parts of Spain and Italy with the same views. Thus fraught with agricultural knowledge, he continued his labors in that work; comprehending, in addition to his own observations, useful communications from practical farmers, bearing their signatures, for it was a general rule with him not to admit any unless thus vouched; yet, if my recollection be correct, that practical work was so little attended to by English farmers, that he once stated its sales as not exceeding 500 copies. Since then, indeed, improvements have more readily been adopted, and agriculture has advanced with an accelerated pace, and in Scotland with great rapidity. *Reading*, to obtain agricultural information, has been extended, and become fashionable; and book-farming knowledge is no longer despised. This knowledge is now of greatly increased value, because experiments, with a view to improvements, are not, as formerly, made at random, but on principles founded in the nature of things, and which rest on modern discoveries.

As we have no farmers who cannot read—in order to give to all opportunities of reading, I take leave to suggest for consideration, the expediency of forming, in each township in the State, a farming society, of which the members should meet monthly, to converse on farming affairs—to make mutual communications of their practices in husbandry—to commit to writing every practice not in common use, which may be beneficially extended—and to read and examine modern publications on their vocation; particularly those of the State Society, which the Trustees would gratuitously furnish. To these, such township-societies would find it agreeable and useful to add the best periodical publications which issue from the presses of our own country, either through the agency of Agricultural Societies, or of well informed individuals. With these and a few other books on the subject, each township-society would become possessed, at a very small expense, of a pleasing and instructive agricultural library.

After considering the constitution of the soil he has to cultivate, the next object of the farmer will embrace the means of enriching it, and of preserving its fertility. To enrich it, manure will present itself as of the first importance; and of manures, the dung of his live stock will obviously occur as the most essential ingredient. If the manure from the droppings of his stock could easily be doubled, how great would be the farmer's acquisition? That this is practicable I cannot permit myself to doubt. I am rather inclined to think it capable of a manifold increase. At another public meeting of farmers, I had occasion to suggest some means of preserving and greatly increasing this important article; particularly during that portion of the year when cattle are at pasture, but penned at night in the barn yard. Nothing is more common than to see these yards, after being cleared of manure for the Spring crops, left naked until autumn,* without litter or mud, or earth of any kind, to absorb the urine of the cattle and to mingle with their dung; but all is left open to our burning summer suns, by which the greater part, three fourths, perhaps seven eighths, of the essence of both are exhaled and given to the winds. To prevent this serious loss, I suggested the expediency of giving to the barn yard, as soon as it was cleared out, a covering of any kind of litter, and a coat of earth, mud from low grounds, loam where attainable, or any kind of earth to which a farmer can have easy access; and that as often as once in two weeks, a new coat of earth should be introduced. Weeds from road sides and waste places would make valuable additions to the summer manure. By such means manure may be increased in a four, perhaps an eight-fold degree.

But if in addition to this accumulated summer manure, the farmer, without any of the dung or litter of his cattle, could double the quantity usually made during the winter, would he not consider himself enriched? That this is practicable will appear from a statement I shall now recite; it being the result of careful experiments made in Scotland during a period of ten years. The fact is stated in one of a series of papers written with great ability by Mr. John Young, under the signature of Agricola, (already referred to) and published at Halifax. The urine of cattle produced this mighty effect. I cannot so well occupy your time as by giving the statement in his own words, as abridged by him from the Farmers' Magazine, published in Scotland.

"I should be afraid (says Mr. Young) to hazard my character with the public, by stating in round and unqualified language, the value of this rich juice which is literally wasted and thrown away; and therefore I shall proceed with caution, and give a detail of facts, conclusive in their bearings, and substantiated by the best authority. They are contained in a letter* from Charles Alexander, near Peebles, in Scotland; and are addressed to Sir John Sinclair in 1812, for publication. This intelligent farmer had long been impressed with the great importance of the urine of cattle as a manure; and he sets about to discover, by a long and well conducted series of experiments, the best method of collecting and applying it. He began by digging a pit contiguous to the feeding stall, but distinct altogether from that which was appropriated for the reception of the dung. The dimensions of this pit, according to his own account, were 36 feet square, and four feet deep, surrounded on all sides by a wall; and the solid contents were 192 yards. Having selected the nearest spot where he could find loamy earth, and this he always took from the surface of some field under cultivation, he proceeded to fill it; and found that with three men and two horses, he could easily accomplish 28 cubic yards per day; and the whole expense of transporting the earth did not exceed £1. 16. 0.* When the work was complete, he levelled the surface of the heap, in a line with the mouth of the sewer which conducted the urine from the interior of the building, on purpose that it might be distributed with regularity, and might saturate the whole from top to bottom. The quantity conveyed to it, he estimates at about 800 gallons; but as this calculation was founded partly on conjecture, for he measured not the liquor, it will be better and more instructive to furnish and proceed on *data* that are certain and incontrovertible. The urine was supplied by 14 cattle, weighing about 34 stone each,† and kept there for five months on fodder and turnips. The contents of the pit produced 288 loads, allowing two cubic yards to be taken out in three carts;‡ and he spread 40 of these on each acre; so that this urine in five months, and from fourteen cattle, produced compost sufficient to fertilize seven acres of land.§ He states further, that he tried this experiment for ten years, and had indiscriminately used, in the same field, either the rotted cow dung, or the saturated earth; and in all the stages of the crop he had never been able to discover any perceptible difference. But what is still more wonderful, he found that his compost lasted as many years as his best putrescent manure; and he therefore boldly avers, that a load of each is of equivalent value."——"The dung pit, which contained all the excrementitious matter of the 14 cattle, as well as the litter employed in bedding them, and which was kept separate for the purpose of the experiments, furnished, during the same period, only 240 loads; and these, at the same rate, could manure only six acres."

On this statement one remark forces itself into notice. That for the want of such a reservoir for saving the urine of our cattle, more than half of our winter made manure, and this is the farmer's chief dependance, is lost.

It is not stated whether the pit filled with loam was or was not covered: but unless covered, rains would saturate the earth, and thus in a manner exclude the urine conveyed to it from the cattle stall. It should also be noted, supposing the pit to have been covered, that the frosts in Scotland would seldom so freeze the earth in the pit as to prevent the absorption of the urine. The frosts in Massachusetts

* "Farmers' Magazine, vol. xiii, page 78."

* $21 31. Seven days work for three men and two horses; each horse, I suppose, in a single cart, a common usage in Scotland.

† This would be the weight of a cow.

‡ This gives 18 cubic feet to each load.

§ Seven Scotch acres are nearly equal to nine English and American acres.

would doubtless require that the pit should be sunk to some depth, and certainly be under cover. In a word, a barn-cellar would seem to be the proper receptacle for this important manure. How it should be arranged, must depend on the situation of the barn. In Pennsylvania, barns, which are commonly of stone, are often erected by the side of a hill, by which means a story is gained for their cattle stalls. By digging where there is a gentle slope, a sufficient excavation for a barn-cellar would be easily made, to drive in a cart on a level, for carrying in the earth in autumn, and for removing the manure in the spring. With the increased fertility of his soil, the farmer will be able to increase his live stock; and the live stock, in return, will be constantly adding to the productions of the soil.

In respect to Live Stock, it is gratifying to see the spirit excited within the last five or six years, to attend to their melioration, by preserving some of the most promising for breeders, instead of sending them to the shambles; and by introducing from other countries some individuals already highly improved. New England was originally granted to merchants of Plymouth, in the county of Devon, in England. It is natural to suppose that some of the early settlers sailed from Plymouth, and brought with them the Devon breed of cattle. The uniform red color of various shades, some deep red, and approaching to brown, now so commonly seen among us, are probably descendants from the Devon race originally imported. Their uniform red color corresponds with a distinguishing mark of the Devon breed, now so highly improved and celebrated in England. Among our own, individuals of this stock might be selected, admitting, with equal care, of equal improvements, on the principles now so well understood by the eminent English breeders, who, Mr. Arthur Young has said, are indebted for them to the celebrated Robert Bakewell. On the same principles all our other domestic animals may be improved. And this course appears to me indispensable for the speedy attainment of extensive improvements of our stock, of neat cattle especially. More than one generation must pass away before highly improved races, from the few imported animals, can be generally obtained. In this important work every substantial farmer in the country ought to engage; and by their rival efforts in every county, the great object might be accomplished. Beauty of form is desirable, and will merit attention: but strength for labor and ample supplies for the dairy, are more important. A disposition *to fatten at an early age*—a point of excellence zealously sought for in England, where husbandry labors are chiefly performed by horses, is not of material consequence to New England farmers, where oxen for the drought and cows for the dairy constitute their most interesting stock. But what shall farmers, who live remote from a veal-market, do with their surplus calves, above the numbers of the best selected to keep up their stocks, and to supply those whose situation may induce them to purchase, and not breed for themselves?—I will mention what was some years since stated to me as the practice of a respectable farmer in Connecticut. He had cows for a large dairy, and cheese-making was his object. He allowed his supernumerary calves to suck their dam three days, (or until the milk was fit for the dairy) and then killed them; taking off their skins, and giving their flesh to his store-hogs. This was to me a singular instance of practice; but from the good sense of that farmer, I conclude he must have experienced it to be not merely a necessary but a saving practice. It may be in use among other great dairy farmers, although I do not know that it is.

The Trustees have already offered a premium to encourage the making of Fine Butter. But I am inclined to think it will be difficult, if not impracticable, to make any of the greatest excellence, during summer, without the aid of ice-houses or spring-houses. The city of Philadelphia is admitted, I believe, to be supplied with *some* butter, during the warm months, superior to what is found in other cities of the United States. Yet their pastures are not better than those in the vicinity of some other cities and towns. I ascribe this superiority exclusively to the spring-houses on many of the farms in the neighborhood of Philadelphia. Pennsylvania is a well watered country. There it seems to have been an early practice, in taking up land for a farm, to search for a spring; and as near to it as the ground would permit, regardless of its situation in respect to the public road—to erect the dwelling house. Here the cattle, as well as the family, would at once find good water, without the labor of digging a well. Over these springs small houses are erected usually of stone. The room of the spring-house may be from ten to twenty feet square, according to the quantity of milk to be provided for. Trenches are made on the four sides of the floor, and bottomed and lined with flat stones. The residue of the floor is likewise paved with stones. The water from the spring enters at the side of one trench, runs all round, and at the opposite side passes away at a hole left in the wall. The under side of the hole is at such a height above the bottom of the trenches, as to raise the water just enough to keep the milk cool in the pans which are placed in it. This water runs perpetually from its source, and as constantly passes off at the outlet. In one of the trenches are also set the cream pots, and the pots with the butter the night before it is carried to market. Perhaps in the vicinity of Boston and other towns in the State, there may be some springs which may furnish the same accommodations.

Much has been said and written concerning an evil which pervades our whole country, from one extreme of the Union to another—the general use of spirituous liquors—prevailing, in the opinion of wise and good men, to a mischievous excess. Sometimes it has been hoped that Agricultural Societies might find means to check the pernicious practice. But the class of farmers who abstain from it must be too numerous to become candidates for premiums on temperance. Besides, such prudent men need no remuneration for their abstinence. Here virtue is indeed its own reward.

It is said that in France and Spain the laborers in husbandry are remarkable for their temperance: but they drink small wines instead of ardent spirits. A French gentleman who for some years was endeavoring to establish vineyards in the Middle States, particularly in Pennsylvania, once mentioned to me how cheaply the French peasantry could be regaled with wine, purchasing a bottle for a few pence. At the same time, in answer to my question, he admitted that such wine was not equal to good American bottled cider. It has occurred to me that nothing might be so likely to check, and in a good degree to supercede the general and excessive use of ardent spirits, as the universal introduction of

Good Cider.

Were this beverage as well made as easily it might be, it would be alike palatable and wholesome; and in the end might banish spirituous liquors from the houses of the great body of our citizens. Good cider might be furnished at half the expense of strong malt liquors; provided apple orchards were more extensively cultivated, and the fruits intended for cider properly selected. We have a great deal of bad cider, because sound and unsound apples are ground together, and no regard is paid to fermentation, except to give it vent. No one can suppose the juice of rotten apples capable of becoming cider. But in whatever degree they are introduced, in the same degree the liquor must be debased. To make the finest cider, sound apples only should be used. But I must not enter into the minute particulars of the process of making and managing cider—it would not comport with the occasion, nor be practicable within the limits to which this discourse must be confined. I will barely suggest a few things which involve some principles.

In every orchard are found a great variety of apples generally used for cider. In New England I presume these are chiefly wild, that is, ungrafted fruit. And I have heard the opinion expressed, that such wild fruit would make the best cider. This surely is an error. For although in a large orchard some good natural fruits may be found, yet many of the trees produce apples so small as to cost too much labor to collect them, and others have juices so meagre as when collected to be of little worth. A few sorts which in England have been celebrated for yielding the finest ciders, were always grafted with as much attention as apples designed for the table are with us. But in England, the apples which a century ago furnished ciders of distinguished excellence,—to use the expressive words, in like case, of some of our own farmers —*have run out*. They can no longer be continued by grafting, This well known fact in that country, has led an eminent naturalist there to advance the novel doctrine—doubtless as true as novel—that trees, like animals, have their infancy, youth, maturity and old age. Grafts from the last, though inserted in young stocks, soon perish. Hence the farmers there have been seeking for fine cider fruits from new trees growing from the seeds; and when any of these are found to possess the desired qualities, they are propagated and extended by grafting.

In some parts of New Jersey, in which ciders of superior excellence are made, the farmers produce them wholly by grafting: nor can we expect fully to rival them, until we adopt the same practice.

Perhaps there are few extensive natural orchards in Massachusetts in which valuable cider fruits may not be found, with rich yellow flesh, capable of yielding liquors strong and of excellent flavor. From such trees, if still young, or in vigorous life, whole orchards might soon be formed. And probably different kinds might be selected which ripen their fruits at the times

most proper for making them into cider. Apples until mellow do not attain their highest flavor; and till then cannot give the highest flavor to cider. Many reach that mellow-ripe state in October and November, which may be called the cider-making months in Massachusetts. It would require but little attention to select and propagate the best apples thus ripening in succession. Such ciders, made of ripe and unmixed fruits, would be more easily managed in the most difficult and important part of the process of cider-making—its first fermentation; on the right or wrong conducting of which the character of the cider depends. In one case it will be soft and pleasant—in the other hard and austere.

The Trustees of this Society have, I believe for several years, been offering a liberal premium to encourage the

TURNING IN OF GEEEN CROPS,

as a mode of manuring land: but I do not recollect that the premium has been claimed. It has been an ancient practice in other countries; and is not unknown in our own country. Dr. Eliot (whom I have already had occasion to mention) noticed it seventy years ago, in his Essays on Field Husbandry; and recommended millet as a plant well adapted to that purpose. The seed being but little bigger than cabbage seed, a small quantity will be sufficient for an acre. I have often heard of the turning in of Green Crops being occasionally practiced in Pennsylvania. Many years since, an intelligent man of that State mentioned to me a farmer, who had purchased a farm in a township remarkable for the general poverty of the soil; and that he improved his own by ploughing in green crops—buckwheat, oats, rye;—turning them in repeatedly, until the land produced crops worth harvesting. Sir John Sinclair, in his Code of Agriculture, speaks of the practice of ploughing in buckwheat and other crops, when manure was deficient. But he says that in Lincolnshire, buckwheat had for several years been ploughed in as a manure, and ultimately given up as doing no good. He then adds —"Unless so far as nourished by the atmosphere, the vegetables thus treated are supposed merely to restore the nourishment obtained from the soil." And this is the very principle on which the ploughing in of green crops materially depends. The plants while growing derive a portion of their food from the air; and being turned in, so far at least add manure to the soil. But this is not all the benefit: weeds spring up with the sown green crops, and are sown in with them; thus increasing the manure, and at the same time cleaning the ground for a harvest crop. But besides the growing plants, the soil itself, under their shade, made light by the ploughing and harrowing, is also receiving a portion of the same fertilizing airs. Lord Kames, however, in his Gentleman Farmer, says—"I approve not of ploughing down buckwheat, red clover, or any other crop, for manure. The best way of converting a crop into manure is, to pass it through the body of an animal. The dung and urine, not to mention the profit of feeding, will enrich the ground more than to plough down the crop." Notwithstanding these authorities—and the opinion of Lord Kames is entitled to very great respect—I am inclined to think that the circumstances and condition of many farms may be such as to render the practice eligible; particularly when manure is deficient;—and where is it not deficient? Is it not a received fact, when lands have been impoverished by cropping without manuring, that by letting them lie a few years *at rest*, they acquire such a degree of fertility as to bear a crop of some sort that rewards the farmer's toil? If this happen to unseeded land, thrown out as waste, how much sooner may it be recovered when sown with buckwheat, oats, rye or millet, and the crops when in full blossom ploughed in? If this product be small, let the land be again sown, and a second crop be ploughed in. And if a third sowing and ploughing in were given, what would be the whole expense? A trifle compared with a dressing with stable or barn yard manure—if it could be procured. This is to be carted to the field and spread, in order to be ploughed in: but the green crop is on the ground, and evenly spread, ready for the operation of the plough. But leaving all theoretical reasoning, I will recur to well authenticated facts.

The late distinguished agricultural writer, Arthur Young, Secretary to the English Board of Agriculture, so lately as the year 1811, delivered before that body an interesting lecture, to describe the husbandry and speak the praises of three celebrated British Farmers. One of these was Mr. Ducket, who occupied in succession, two "sand farms;" that is, farms in whose soil sand was predominant. It was one of the practices of this very ingenious farmer, to plough in green crops to enrich his land. And to do it effectually, he contrived a plough with which, when drawn by four horses, he could open his furrows to the depth of eight or ten inches, and in them perfectly bury his green crops. The opening of so deep a furrow was called *Trench-ploughing*; and by the simple addition of an arm partly curved, and fixed on the right side of the coulter, at the desired height of eight or ten inches above the sole or bottom of the share, the growing crop was pressed to the ground; and the furrow-slice raised by the plough, following close behind and turned completely over, perfectly buried the crop and weeds. This coulter of Ducket's trench plough, with the curved arm attached to it, is called a *skim-coulter*. The arm must necessarily extend so far to the right as the breadth of the furrow; and just at that extreme, I conceive, the curve downward begins, so as, when the growing crop is pressed flat, the stems or straws may not spread out any further; and being thus confined, are completely overwhelmed. Hence there would be no vegetation in the seams of the furrows. "By means of this tool (says Mr. Young) I have repeatedly seen on his farm, stubbles completely turned down, and crops of turnips, tares and other plants instantly put in; which crops I have afterwards viewed with equal pleasure and surprise; the execution was as complete as the design was sagacious: but it went further—converting the nuisance of any weeds into manure. So effective was the work of the plough, that I once saw him turn down a crop of rye six feet high, and immediately roll in turnip seed. The effect did not depend so much on an extraordinary depth of ploughing, as on the subversion of the soil; for of the rye I have just alluded to, not an atom was left visible; and yet the depth did not exceed eight inches. But if there be Couch [twitch grass] in the soil, this ploughing is ten inches deep; and the succeeding crop in any case well hand-hoed. This trench-ploughing system is not practiced above once in two or three years, and the successive tillage shallow, upon the surface. By such deep ploughing, seldom given, Mr. Ducket conceived that a due degree of moisture was preserved in his light land; by means of which his crops were flourishing in seasons of drought which destroyed those of his neighbors."

Here perhaps the question will occur—were Mr. Ducket's improvements adopted by other farmers? Mr. Young says they were, by some of his enlightened brethren. Why they were not generally imitated, Mr. Young ascribes (I repeat his words) to "the perversity which characterizes the ignorance of English farmers." Again he says, "If our farmers would have adopted the practices really excellent, as soon as they were known, British agriculture would forty years ago have arrived at its present state; and at this time the kingdom would have been a garden."

In connexion with this account of Mr. Ducket's practice, I take leave to suggest the necessity, or at least the great utility, of an occasional fallowing; primarily, in order to destroy the weeds which infest so many fields, and essentially injure all crops of small grain, especially spring wheat, which ripening more slowly than rye and barley, is much more oppressed by the weeds. In effecting the object here suggested, and to enrich the soil while making a fallow, I would recommend the following mode of practice. As soon as it can be done in the spring, plough, sow and harrow in the seed of the crop intended to be turned in. Weeds will spring and grow with the crop.—When the latter is in full blossom, turn it in. Immediately sow for a second crop. With this also will arise another crop of weeds; and both, as before, are to be turned in. Should the season permit, and the foulness of the ground require it, sow for a third crop, to be ploughed in, like the former, before winter. A field thus managed will be in good order for a crop of barley, summer wheat, rye or oats, in the ensuing spring; and of either a comparatively clean crop may be expected.

This dressing with green crops, valuable as I conceive it to be, need not be confined to sand farms; it will be not less beneficial in all light gravelly loams, which I suppose rather to abound in Massachusetts; certainly, stiff, clayey loams are not common.

A few concise remarks on the general principle, and on some of the objects of these annual exhibitions, will conclude this address.

It is supposed, and justly, that these public shows, by exciting an emulation among farmers, will lead to important improvements in our husbandry. The general question which the case presents, is, What will be the easiest, cheapest, and most effectual means to accomplish this great object? A principal one has been to grant premiums for the greatest crops of specified plants on given quantities of land. One pleasing result has appeared—that by ample manuring and good culture, the usual crops of the same plants may be doubled and trebled. But is it necessary to continue premiums of this kind? May not now the management of farms rather claim attention? Instead of numerous small pre-

miums dispersed on a variety of objects, might they not be advantageously concentrated for the purpose here intimated—the cleanest, most economical, the most productive management of farms? *For it must be such a general improvement of the entire farm that will constitute the farmer's permanent prosperity.* The decision of claims on this ground cannot be expected to be made by a committee of this Society to travel through the whole State: but will it not be practicable by county committees? Perhaps it may not be difficult for the Trustees of the State Society to prescribe some general principles and rules of proceeding, that may produce uniformity in the reports of county committees acting under their direction.

In ploughing, the just aim must be to make straight furrows, and of a uniform breadth and depth; and so turn over the furrow-slice as completely to cover whatever plants or manure are upon it. All this cannot be effected with a *hurried* step. And what benefit can possibly result from such a step? A farmer's oxen at the plough must labor a great part of the day properly to turn over an acre. To do this without a driver, will require a skilful ploughman and well trained oxen. To encourage the forming of such ploughmen and oxen, should, I conceive, be the sole object of ploughing matches. Working-oxen at the plough, may be considered as well trained when they obey the voice of the ploughman, keep the track in which they ought to move, and step as quick as will be compatible with the necessary continuance of their labor. And as the annual exhibitions at this place have demonstrated the practicability of performing the *general* operations of the plough with one yoke of oxen, without a driver, it may merit consideration whether premiums should not be thus limited in all future trials with the plough. Under such limitations, every farmer who is ambitious to exhibit proofs of superiority in these points, would be sensible that his oxen must attain a certain size, and be, though not fat, yet well fleshed; which would give strength to their sinews and momentum to their exertions. With such oxen all our agricultural labors would be so well performed, that there would be no room to envy the condition of farmers in any of our sister States; in some of which, their horses consume perhaps as much grain as would furnish bread to all the inhabitants of New-England.

FOR THE NEW ENGLAND FARMER.

MR. FESSENDEN,

The improvements in agriculture which have recently and generally been adopted in our country, while they evince the intelligence and enterprise of the farmer, have given him pre-eminence among the benefactors of the commonwealth. He has acquired the skill of improving his soil, and possessed himself of the best implements for its cultivation. He is judicious in his rotation of crops, best adapted to the soil in reference to the succession. He prepares his seed in the best manner, and sows it at the season most favorable to vegetation, and with a liberality which promises the greatest abundance. Thus far is well, and gives a fair indication that the details of his whole system are in unison. Still I am apprehensive that most farmers are too inattentive to the most essential requisite in good husbandry—I mean in the selection of their seed, generally, but particularly to the purity of the kind sown, broadcast, upon their best prepared soil. One error, here, may mar our whole system, and render our skill productive of as much evil as good. On poor and worn out land, the evil of sowing a mixture of impure seed, with grain or grass seed, would be great—but where the ground is in high order, the crop is more injured; the noxious plants take firmer hold, and are more difficult to be eradicated.

I have known farms, otherwise well cultivated and productive, incalculably diminished in their value from neglect in this precaution. I have seen fields of grain in such full blossom with *wild turnips*, as to appear the standard crop. I have seen others so choked and entangled as to render it doubtful whether the culture of *rye* or *tares* was intended. I have further seen extensive enclosures of luxuriant grain overtopped by the gaudy and luxuriant *Canada thistle*, or more stately *dock*.

I have no objection to the owners of these farms regaling themselves and their cattle with this nauseous mixture, if it best suits their taste—but I protest against their vending it to others for food—more especially for seed. In the latter case, they do an act, worse than most things which are considered *frauds* in other transactions. To sell me a diseased animal, as sound, would be a small injury compared with the selling me a bushel of oats with the mixture of an ounce of tares or wild turnip seed. The animal might die, and I should lose only my money, and some expense in endeavoring to save him; but my farm has received a malady of which it cannot be cured for years, nor ever, without much expense of time and labor.

These sentiments, in the *abstract*, will appear pertinent to every judicious farmer—but I fear there are many, like myself, whose reflections have been called to the subject by *experience*. Making it my rule that nothing should be suffered to grow which injured the crop, my vexation was extreme when in two instances the grain which I had purchased for seed communicated a profusion of wild turnip to my ground. By great care and diligence through the summer, I in both instances succeeded in preventing a further spreading—but the time spent, and the injury to my grain in eradicating it, made a deduction of nearly half the value of the crop, besides a further trouble from the seed which was brought to vegetate in succeeding years. In the spring of 1821 I laid a field down to grass with rye. Learning that a farmer in town had raised a rare and valuable kind, I purchased, at an enhanced price, a supply for sowing. The grain appeared well; but so beset with tares that it was useless to attempt to pull them out. After harvesting I dug up what roots I could find, and secured many of the unshelled pods. Instead of mowing the grass the present season, as I intended, I turned in my cows to prevent the further seeding of this baneful plant. In this case the damage was not only great, but what is worse, there is no calculating its duration.

There was culpable error, I admit, in sowing any grain without carefully examining it. This negligence is too common. The only palliation in my case, was, that I purchased it of persons who pass for good farmers. But the security of having good seed ought not to depend upon the inspection of the buyer. If he is vigilant himself, he may often be under the necessity of entrusting his business to others who are unfaithful. The seller, if he raises the seed, knows whether it be impure. If it is so, it is a fraud; for the consequence of which, he ought to be made liable. But whether he raises it or not, if it is bad, the effect is the same to the purchaser; and the vender should be answerable.

In England, wholesale venders of seed are required by law to brand their casks with their names: and all who sell are responsible to the purchaser if the seed is bad. In this commonwealth, where agriculture is so liberally patronised by the Legislature, a law of this kind is obviously required and expected. The first dawnings of this kind, in that body, upon the subject of the Canada Thistle, are hailed with pleasure. But it is hoped that while they are endeavoring to expel a foreign enemy, they will not be unmindful of domestic foes, more insidious and destructive.

Yours, with respect,

O. FISKE.

Worcester, January 15, 1823.

THE FARMER.

BOSTON:—SATURDAY, FEB. 8, 1823.

Mr. Pickering's Address.—We are sure that our columns could not have been better filled than with the able Address of the Hon. TIMOTHY PICKERING, which occupies most of the pages of our present number. It is true that many of our readers will be furnished with this valuable paper from the Massachusetts Agricultural Repository, in which it originally appeared. But there are others, who, it seems, have for some time been waiting with solicitude for its appearance in our paper. We have repeatedly been requested to furnish it, and are now happy in complying with the wishes of our friends, who have made such applications.

We are somewhat at a loss how to express our opinion of this Address in such a manner as to convey our real sentiments; and at the same time avoid the appearance of that kind of encomium which often displeases men of merit. We shall, however, venture a few words, with a disposition to say no more than truth justifies, and justice demands.

Although the subjects of the Address are not only important, but many of them abstruse, forming what may be styled the metaphysics of chemistry and physiology; still there appears to be nothing in Mr. Pickering's observations, which is hard to be understood.—Volumes after volumes have been written on the food of plants; the elements, or chemical constituents of vegetables; the mode of operation, the manner of applying, and the benefits resulting from the application of lime; the different kinds of earth necessary to constitute fertile soils; the burning of clay for manure; the obstacles, which prejudice, and a pertinacious adherence to old usages oppose to improvements in agriculture, and the best means of overcoming such obstacles; the best methods of accumulating and applying manure; methods to improve the different breeds of live stock, &c. &c. But we do not remember ever to have seen so many, and such important topics comprehended in even more than double the number of pages containing Mr. Pickering's remarks on those subjects. But, though the progress of the orator was necessarily rapid, from the great extent of the field, which he undertook to survey, he was able to shed new light on every object which came in his course. In short, we never read an agricultural essay, which, in our opinion, exhibits so

much *useful matter* in so *short a compass*. We think it should be a subject of congratulation with every friend to his country, that an eminent statesman and revolutionary patriot should be induced to exert his influence, employ his time, and devote his talents to promote the interests of agriculture, the most noble of the sciences, as well as the most useful of the arts.

The Editor has received a letter from Mr. Kenrick, of Newton, accompanied with a very acceptable present of a bottle of his Currant Wine, or "Columbian Grois lle." Mr. Kenrick states that this wine is sold by the keg at $1,08, and by the barrel at $1, per gall. red at $5 per dozen, white at $6,50. We do not profess any connoisseurship with regard to wine, and can only say that the sample sent us was very agreeable, not only to our palate, but to the palates of some friends, whom we employed as *tasters* on the occasion. We therefore cheerfully recommend it as a pleasant, palatable, and we doubt not wholesome beverage.

Mr. Kenrick further remarks, that, "the facts collected by Col, Pickering, in regard to the best time for felling Timber, I consider of very great importance. Mr. Cooper told him that white oak, as well as hickory, felled in barking time, would not be bored by worms. I wish that some of your correspondents, who live nigh the salt water, would undertake to make experiments on yellow and white pines, hickory, chesnut, and every sort of oak used in shipping. Samples should be felled and sunk in water now; and similar samples should be felled in barking time, and placed beside them. If I am not mistaken, nearly all the posts in West Boston bridge were soon ruined so completely by worms, as to require replacing. I believe they were originally white pine.

"I am about entering on a course of experiments to ascertain the *cause*, in a satisfactory manner, why the worms, both on dry land, and under water, prey upon hickory and other wood felled in the winter season, but not when felled in barking time. If I succeed I will give you the result; and if you have a trusty friend that will make the experiment under water, we shall be able to give the public information of the highest importance to every section of our country."

The Editor would be greatly obliged to any friend who would make the experiment suggested by Mr. Kenrick, and would give his personal assistance so far as his indispensable avocations would permit.

FARMER SUMMARY OF NEWS.

CONGRESS appears to be pretty diligent in ways of well doing, and will make, it is hoped, a *good job* of their legislative proceedings the present session. The Post Office committee, on motion of Mr. Holmes, has been instructed to report on the expediency of transmitting the principal Eastern mail in steam boats.—They appear to be instituting a *sharp look out* relative to *money matters*, and do not intend that that the *garb* of patriotism shall be used as a *cloak* for peculation. They have, likewise, a bill on the carpet to provide for the admission of persons as revolutionary pensioners, whose applications have been rejected in consequence of the largeness of their property, but have since become poor. Their business, however, chiefly consists of details of important but not general interest.

MASSACHUSETTS LEGISLATURE will, we believe, close its session on Tuesday next. The bill relative to Imprisonment for Debt has been negatived. The bill concerning the Boston House of Industry, has been completed. A bill has passed to regulate the going at large of sheep, rams and he goats at certain seasons of the year. A bill farther to regulate the practice of Physic and Surgery has passed to be enacted. The bill imposing a duty on auction sales has passed. The bill respecting religious freedom has been postponed indefinitely. A bill passed to be enacted, authorising overseers of the poor to act as guardians.

FOREIGN.—The latest news from Havre comes down to the 15th December. The appearance of the political horizon in Europe is less ominous of war than at the preceding accounts. Spain, it is said, is to be left to her own management, and France has ordered her troops, destined for that country, to rest upon their arms for the present. The Constitutionalists in Spain continue to be successful. The Greeks are likewise triumphant. Chourschid Pacha had a fresh defeat on the 22d, 23d and 24th of October—had lost 700 men, and retreated to Larissa.

DOMESTIC.—According to a statistical table, the distance between Washington City, and the new Colony contemplated at the mouth of Columbia river, is almost the distance between Washington and London.

Mrs. Rebecca Long, of Concord, N. H. and one of her daughters, were, not long since, poisoned by some white lead having been accidentally mixed in a quantity of sugar. Their sufferings were prolonged and very excruciating. [An English medical writer, whose name is not now recollected, states, that "when mineral poisons, technically called oxides, are taken internally, one table spoonful of powdered charcoal is a complete antidote, mixed with either honey, butter or treacle, taken immediately; within two hours administer either an emetic or cathartic; in this way the effect of the poison is prevented." We do not, however, presume to vouch for the efficacy of this remedy, but submit it for the consideration of medical men.]

The Albany Daily Advertiser of the 28th ult. states that the Albany stage was overturned in the Highlands on Friday, and one of the passengers, a gentleman from Vermont, had his collar bone broken, and several others were more or less injured. The accident was caused by the driver's attempting to pass an opposition line.

Large Hogs.—William Yale, Esq. of Meriden, Con. fatted and killed on the 6th Jan. five hogs, weight as follows: 462, 476, 484, 486, 542—in all 2450.

Firkins of butter have been sold at Montreal, which, after penetrating two inches below the surface were found to contain a mixture, fit only for the soap boiler.

A gang of counterfeiters of Spanish milled dollars has been discovered in Lower Canada, in the neighborhood of Montreal, and two of them apprehended. The dollars, it is said, were extremely well imitated. A gang of robbers, which had carried on its depredations for some time in the neighborhood of Montreal has likewise been detected and committed to prison.

Fires.—A new grist mill with two run of stones, belonging to Mr. Robert T. Shaw, of Lansing, N. Y. was destroyed by fire on the 9th ult. in consequence of the carelessness of the miller.—The Congregational Church in the village of Great Barrington, (Mass.) was discovered to be on fire on the 13th ult. The fire had obtained a formidable ascendancy, when the building, and probably the whole village was preserved from destruction by the intrepidity of Mr. Gilbert Ford, who mounted the roof at the hazard of his life, and poured water on the spot where the flames issued most copiously. The fire is supposed to have been communicated from a small wooden box, containing ashes, into which some of the female part of the congregation had probably emptied the contents of their stove-pans the day previous.—On the 20th ult. a barn, containing 200 bushels of wheat, a quantity of oats, and hay sufficient to winter a large stock of cattle, was consumed in Addison county, Vermont. The fire was communicated by Sylvester Hanks, son of the sufferer, who, having deliberately set fire to the building, was the first to give information. He was asrested and sent to Middlebury jail.—A grist mill belonging to Gen. Stephen Van Ransellaer, at Albany, was lately consumed by fire. Damages estimated at $25,000.—On Friday, of last week, several valuable stores, in Norfolk, Va. were destroyed by fire, and a Mr. Talbot, in whose store the fire originated, perished in the flames, and several other persons were seriously injured.

The following appointments have been made by the President, and confirmed by the Senate, viz: General Jackson, minister to Mexico; Cæsar A. Rodney, minister to Buenos Ayres; Richard C. Anderson, minister to Colombia; and Heman Allen, minister to Chili.

A young married lady was lately killed in Westmoreland County, Va. while riding in a gig, by the falling of a tree upon the carriage. Two of her children and a servant maid were in the gig, and were providentially unhurt.

DIED—In Cambridgeport, on Wednesday evening last, STEPHEN PYNCHON, Esq. Representative in the Legislature of this State, from Brimfield.

In Albany, Moses I. Cantine, Esq. senior editor of the Argus.

In New York, Mr. Joseph Tyler, aged 73, the oldest member of the Dramatic Corps in the U. States.

FOR sale at the Agricultural Establishment, No. 20, Merchant's Row, a general assortment of the most

APPROVED FARMING TOOLS—viz.

Harrison's Corn Shellers; Straw Cutters; double and single mould board Ploughs, of various kinds—Beetson's Cultivators—Bennett's Broad Cast Machine for small seed; extra cast steel broad and narrow Hoes—Foster's best English Shovels—Ames' back strapp'd do. Cam's English cast steel warranted Scythes and Hay Knives; Brush Scythes—Stevens' Patent steel spring Hay and Manure Forks—Brown's Vertical Wool Spinner, &c. &c.

Boston, Jan. 25.

PRICES OF COUNTRY PRODUCE, &c.

[Revised and corrected every Friday.]

		FROM		TO	
		D.	C.	D.	C.
ASHES, pot, 1st qual.	ton.	143	00	145	00
pearl do.		153	00	155	00
BEANS, white,	bush		90	1	00
BEEF, mess, 200 cwt.	bbl.	9	00	9	50
cargo, No. 1.		8	00	8	50
" No. 2.		6	50	7	00
BUTTER, inspect. 1st qual.	lb.		14		15
" 2d qual.			12		13
small kegs, family,			16		17
CHEESE, new milk			7		9
FLAX			8		9
FLAX SEED	bush	1	00	1	10
FLOUR, Baltimore, superfine,	bbl.	7	25	7	50
Genessee		7	50		
Rye, best		4	25	4	50
GRAIN, Rye	bush		85		90
Corn			72		75
Barley			60		65
Oats			45		43
HOGS' LARD, 1st sort	lb.		9		10
HOPS, No. 1,			11		12
LIME,	cask	1	25	1	50
OIL, Linseed, American	gal.		65		70
PLAISTER PARIS	ton.	3	00	3	50
PORK, Navy Mess	bbl.	12	00	12	50
Bone Middlings		14	50	15	00
Cargo, No. 1,		12	00	12	50
Cargo, No. 2,		11	00	11	50
SEEDS, Herd's Grass	bush	2	00	2	25
Clover	lb.		8		9
WOOL, Merino, full blood, washed			65		75
do. do. unwashed			60		65
do. 3-4 do.			50		54
do. 1-2 do.			46		48
Native do.			37		40
Pulled, Lamb's, 1st sort			58		60
do. Spinning, 1st sort			50		
PROVISION MARKET.					
BEEF, best pieces	lb.		8		10
PORK, fresh			5		6
VEAL,			7		8
MUTTON,			3		7
POULTRY,			7		9
BUTTER, keg & tub			16		17
lump, best			20		23
EGGS,	doz.		22		25
MEAL, Rye,	bush		90		
Indian,			80		
POTATOES,			37		
CIDER, liquor,	bbl.	1	50		
HAY, best,	ton.	22	00	24	00

The wearisomeness of what is commonly called a Life of Pleasure.

The spleen is seldom felt where Flora reigns ;
The lowring eye, the petulance, the frown,
And sullen sadness, that o'ershade, distort,
And mar the face of beauty, when no cause
For such immeasurable woe appears ;
These Flora banishes, and gives the fair
Sweet smiles and bloom, less transient than her own.
It is the constant revolution, stale
And tasteless, of the same repeated joys,
That palls and satiates, and makes languid life
A pedlar's pack, that bows the bearer down.
Health suffers, and the spirits ebb ; the heart
Recoils from its own choice—at the full feast
Is famish'd—finds no music in the song,
No smartness in the jest, and wonders why.
Yet thousands still desire to journey on,
Though halt and weary of the path they tread.
The paralytic, who can hold her cards,
But cannot play them, borrows a friend's hand
To deal and shuffle, to divide and sort
Her mingled suits and sequences, and sits
Spectatress both and spectacle, a sad
And silent cypher, while her proxy plays.
Others are dragg'd into the crowded room
Between supporters ; and, once seated, sit,
Through downright inability to rise,
Till the stout bearers lift the corpse again.
These speak a loud memento. Yet even these
Themselves love life, and cling to it ; as he
That overhangs a torrent, to a twig.
They love it, and yet loath it ; fear to die,
Yet scorn the purposes for which they live.
Then wherefore not renounce them ? No—the dread,
The slavish dread of solitude, that breeds
Reflection and remose, the fear of shame,
And their invet'rate habits—all forbid.
Whom call we gay ? That honor has been long
The boast of mere pretenders to the name.
The innocent are gay—the lark is gay,
That dries his feathers, saturate with dew,
Beneath the rosy cloud, while yet the beams
Of day-spring overshoot his humble nest.
The peasant too, a witness of his song,
Himself a songster, is as gay as he.
But save me from the gaiety of those
Whose head-achs nail them to a noon-day bed ;
And save me too from theirs whose haggard eyes
Flash desperation, and betray their pangs
For property stripp'd off by cruel chance ;
From gaiety that fills the bones with pain,
The mouth with blasphemy, the heart with woe.

COWPER.

From the Northern Sentinel.

MR. MILLS—Having just read a small book, which has been published by Daniel Chipman, Esq. of Middlebury, entitled "An Essay on the Law of Contracts, for the payment of Specific Articles," I cannot refrain from expressing the satisfaction I have derived from the perusal of this work. It treats on a subject which is highly interesting to the people of this State, as from the circumstances of our being rather agricultural than commercial, contracts of this description are very common, and I might even say general, among us. There is a great degree both of elegance and simplicity in the style, and the questions treated upon, are discussed with more than common ability. The book is calculated to be useful, not only to lawyers and magistrates but to every man who is extensively engaged in the ordinary dealings of the community. Such productions ought to be encouraged, and I cannot but indulge a hope that the work will meet with a ready and extensive sale, and that the author will be liberally remunerated for his exertions in spreading useful and necessary information, before the people, particularly as the price is such as to prevent scarcely any person from becoming a purchaser.

JUSTICE.

Honey a cure for the Gravel.—A number of years ago, says a correspondent, I was much afflicted with the gravel, and twice in serious danger from small stones lodging in the passage. I met with a gentleman who had been in my situation and got rid of that disorder by sweetening his tea with half honey and half sugar. I adopted this remedy and found it effectual. After being fully clear of my disease, about ten years I declined taking honey, and in about three months I had a violent fit of my old complaint. I then renewed my practice of taking honey in my tea, and am now more than three score and ten, and have not for the last twenty seven years, had the smallest symptom of the gravel. I have recommended my prescription to many of my acquaintance and have never known it fail.—*The Corrector.*

Extraordinary Circumstance.—A Cow belonging to Deacon N. Adams, which had been missing forty days, was on Wednesday last, found in a passage about three feet wide, obstructed at one end, between two barns, in the vicinity of her owner's residence. She was greatly emaciated, and although found standing was unable to walk, and she died on Thursday morning.—There is no doubt that this cow went into this place about the time she was missed, and being unable to turn herself, and not having sagacity enough to back out, the poor animal remained the whole 40 days without a morsel of food, and suffering from the effects of extreme cold, snow, rain, &c. This is an extreme case of suffering. The fact of the cow having been in the same place the whole time mentioned, is ascertained by several persons, who state they had seen her there at different times, without attending particularly to her situation.—*Salem Register.*

From the Springfield Patriot.

The Spider, which is generally considered a disgusting insect, is in fact the most ingenious mechanic, the wisest philosopher, and the most infallible prophet among the works of Providence. However much this little animal may be exceeded in other respects by intelligent beings, yet in its power of prognosticating the state of the weather, it far exceeds all other animals of which we have any knowledge. Barometers and eudiometers have been constructed by men at great expense, and are among the proudest efforts of human philosophers; yet, like the heathen oracles, their predictions are ambiguous and confused;—not so the web of the Spider. It is a fact not generally known, though made public some years ago by a French philosopher, that the web of the common spider is a sure index of the state of the air for twelve or fourteen days to come. If the weather is to be fair and calm, the principal thread will be spun to a great length;—if on the contrary the weather is to be stormy and boisterous, the thread will be short and thick, for obvious reasons; and if the spider is seen to repair the damages its slender thread may happen to sustain, you may calculate with certainty upon pleasant weather for many days. If these statements are true, (and we make them not more confidently and positively than those who have attested their truth from actual observation) we have a barometer provided by nature, more to be depended on than the most ingenious contrivance of human skill, and to which all may have easy access.

A Quandary.—A sailor, travelling in New-England, fell in company with a man possessing a full share of *Yankee* curiosity—who after many *important* questions, such as where he came from, where he was travelling, &c. observing his companion had lost an arm, enquired, "Pray, may I make bold as to ask how you lost your arm." "I'll tell you, says the other, if you wont ask me another question."—"Well I wont, says he." "Then 'twas bit off," says the sailor. The honest yankee was about as bad off now as he was before. He kept silence for a few minutes, but at length, in an agony of impatient curiosity, but too mindful of his promise to ask the question direct, he burst forth with this ejaculation—"I wish I knew what bit it off."

LAW OF PATENTS FOR NEW INVENTIONS.

CHARLES EWER, No. 51, Cornhill, Boston, has just published, "An Essay on the Law of Patents for New Inventions. By Thomas G. Fessenden, Counsellor at Law. The second edition, with large additions, corrected and improved by the author."

This work is adapted as well to the use of the Artist and Mechanic as of the Lawyer. The whole was carefully reviewed in manuscript, and recommended by gentlemen of the first legal talents in New England.—The Hon. Judge *Story*, in a letter to the author, observed, "I have no hesitation in expressing my opinion that the book will be highly useful to all persons, who are engaged in obtaining patents, or in vindicating them in Courts of Justice. The manuscript contains a collection of all the cases, on the subject of Patents, within my knowledge ; and the principles contained in them are detailed with accuracy and fulness in the Summary at the conclusion. I know of no work so comprehensive as yours on the subject ; and it may be relied on as a safe guide."

The Hon. *William Prescott*, and the Hon. *Daniel Webster*, after perusing the manuscript stated their opinion as follows: "This edition is a great improvement on the first, and we think it will be a valuable and useful book to the profession, as it contains the statutes, and states, we believe accurately, all, or nearly all the decisions, which have been made on a branch of law, daily growing more interesting and important."

George Sullivan, Esq. a gentleman who has paid much attention to this branch of law, has likewise favored the work with a recommendation, from which the following is an extract :

"Your method of arranging all the decisions in the order of an analytical digest of the several requirements and provisions of our statutes for granting patents, puts the lawyer at once in possession of the judicial construction of the statutes ; while your synthetic Summary, far more extended and comprehensive than in the former edition, places within reach of the mechanic a sure means of judging whether his invention is a fit subject for a patent ; what is required of him by the statute in order to obtain his patent ; and what provisions are enacted for securing to himself and heirs, his meritorious privilege." Feb. 1.

THOMAS W. SHEPARD,

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